

SOME RARE DIPTERA FROM THE BLACKDOWN HILLS IN SOMERSET AND DEVON

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The Blackdown Hills lie on the border between Somerset and Devon, forming a plateau rising to a little over 250 m. They are composed of upper greensand overlying lower lias and keuper marl with almost horizontal bedding. Numerous streams have dissected the plateau and exposed the junction of the porous sandstone over the impermeable clay in the steep valley sides. Seepages arise at and above this junction, forming an extensive series of bogs which are rapidly being drained in the course of agricultural improvement. Some of the remaining bogs are of considerable botanical interest and, as a rapid survey in poor weather demonstrated, also for Diptera.

The survey took place in the first two weeks of July 1988. Sweep netting, pitfall traps and yellow water traps set for 8–10 days were used, but, with two exceptions, the species mentioned here were caught by sweeping. Field work was undertaken by C.M.D. and the specimens were identified by both C.M.D. and A.G. Five species are included in the 'Red Data Book' (Shirt, 1987) and the others are nationally notable, ie occurring, or thought to occur, in 100 or fewer 10 km squares (Ball, 1986). However, some of these ratings are now thought to overstate the rarities of some species (Falk, in prep.). Seven sites are discussed here. Except when stated otherwise, they are in Somerset.

Beacon Lane Meadows (ST 1417), owned by the Somerset Trust for Nature Conservation (STNC), are small, grazed, acid meadows with poorly developed seepages and no true bog, on the north-facing scarp of the Blackdown Hills. They are surrounded by tall hedges and woodland.

Blackdown Common SSSI, Devon (ST 1116) is one of the largest areas of heathland and bog in the Blackdowns. *Molinia caerulea* (L.), *Erica tetralix* L. and *Sphagnum* spp. are abundant. It is an exposed site.

Deadman SSSI (ST 2315), near Holman Clavel, is also owned by the STNC. The vegetation is mostly grazed, marshy grassland interspersed with true bog around the wettest seepages. Part of the hillside has been extensively disturbed during the removal of soil drains, producing areas of bare peat and small pools.

Longlye Common (ST 2612) is a small, traditionally managed farm that includes a few closely grazed acid meadows with floristically rich bog.

Munty (ST 1912) is a small valley head flanked by neglected, dry, acid pasture with alder and sallow carr forming a strip over a stream. There are very small areas of true bog, mostly dominated by tall *Molinia*.

Ringdown Common (ST 1715 to 1816) is an extensive hillside of long-neglected bog dominated by dense tussocky *Molinia* which is being invaded by birch and gorse. *Erica tetralix* and *Calluna vulgaris* (L.) are rarely codominant with the *Molinia*. Extensive carr woodland lines a stream at the valley bottom. One small area that is still grazed is floristically rich bog.

Southey and Gotleigh Moors SSSI (ST 1910 to 1911) form one of the richest mosaics of bog and carr in the Blackdowns. It spans the county boundaries: Southey is in Somerset, Gotleigh in Devon. A wide range of structures is present in the bogs, ranging from short grazed and poached vegetation to dense, species-poor *Molinia* swards. Alder and sallow carr lines the streams and one area has an extensive understorey of *Carex paniculata* L.

Tipula marginata Meigen, Tipulidae, RDB3. 2♂, Southey Moor, 9.vii.88, at the margin of floristically rich bog and alder and willow carr with small streams and numerous seepages. New to Somerset, though known from Hampshire and Dorset (A. E. Stubbs, pers. comm.).

Tipula yerburyi Edwards, Tipulidae. 1♂, Munty, 7.vii.88; 1♂, Blackdown (Devon) 12.vii.88; 3♂, Ringdown 11.vii and 14.vii.88. Two of the specimens were swept from willow, alder and birch foliage, one from open, wet heathland and two in wet woodland, one being caught in a pitfall trap within carr woodland very close to a stream. This species is most frequently found in south west England (Falk, in prep.).

Limonia inusta (Meigen), Tipulidae. 1♂, Ringdown, 15.vii.88; 1♂, Southey Moor, 14.vii.88. The Ringdown specimen was swept from damp secondary woodland. The other was swept from an alder and willow carr adjacent to a stream where *Melica uniflora* Retz. was the dominant grass.

Orimarga juvenilis (Zetterstedt), Tipulidae, RDB3. 1♀, Gotleigh Moor (Devon) 14.vii.88, swept from floristically rich boggy seepages adjacent to a stream about 100 m from the spring from which it arose. The stream was shaded by willows. This species is mainly found in Scotland but it has already been recorded from Devon (Edwards, 1938).

Beris fuscipes Meigen, Stratiomyidae. 1♂, Munty, 12.vii.88, from dense *Molinia* close to willows over a stream. Although nationally this species is restricted to the west of England and Wales, it is probably not uncommon in the West Country (Drake, in prep.). It has been recorded in both counties.

Syndas nigripes Loew, Hybotidae, RDB1. 1♀, Longlye Common, 7.vii.88; 4♀, Ringdown Common, 11.vii.88; 4♂ 2♀, Gotleigh Moor (Devon), 14.vii.88. Apart from the specimen from Longlye Common, whose exact habitat was not recorded, this species was found on open bog. One specimen from Ringdown Common came from the grazed area, the others from dense *Molinia* interspersed with small seepages dominated by *Sphagnum* and abundant *Narthecium ossifragum* (L.) and *Erica tetralix*. The specimens from Gotleigh Moor were collected from seepages at four stations dispersed over a wide area of the open bog and marshy hillside in the most exposed part of the site. This area was grazed by cattle so the vegetation was mostly short.

There are published records for only two localities: a bog in the New Forest, Hants, in 1954 (Collin, 1961) and at Shapwick Heath, a peat bog on the Somerset Levels, in 1985 (McLean, 1986). Falk (in prep.) quotes unpublished records for Berks and Surrey. On the continent it is known from central and northern Europe and European USSR where it is locally common in marshy biotopes, particularly bogs (Chvála, 1983).

Empis volucris Meigen, Empididae, RDB2. 1♂, Beacon Lane Meadows, 7.vii.88. Collin (1961) quotes only two records, the New Forest and Waterperry Wood, Oxon. Drake (1988a) found it frequently on the Gwent Levels beside drainage ditches and at an *Iris* fen near Toller Porcorum, Dorset, 1987 (Drake, 1988b). Falk gives a wide distribution in southern England.

Campsicnemus pusillus (Meigen), Dolichopodidae. 1♂, Gotleigh Moor (Devon), 14.vii.88, swept from grazed vegetation over seepages where the common plants were *Erica tetralix*, *Narthecium ossifragum*, *Eriophorum angustifolium* Honck., *Juncus* sp. and *Potamogeton polygonifolius*. There was very little bare peat here. Fonseca (1978) quotes several localities with wet heath and bog.

Hercostomus chetifer (Walker), Dolichopodidae. 1♂, Munty, 12.vii.88, swept from the stream banks under light shade.

Tachytrechus consobrinus (Haliday), Dolichopodidae. 1♂, Blackdown Common,

12.vii.88; ♂♀, Deadman, 8.vii.88; 1♀, Southey Moor, 9.vii.88; 7♂ 2♀ Gotleigh Moor, 14.vii.88. This fly was invariably swept from short vegetation or bare peat at very wet seepages and small pools, often where *Potamogeton polygonifolius* Pourr was frequent. *Syndyas nigripes* and *Ochthera mantis* (De Geer) were frequently found in the same localities. Fonseca (1978) quotes inland sandy areas as its habitat, and records it from both Devon and Somerset.

Rhaphium auctum (Loew), Dolichopodidae. 1♀, Deadman, 8.vii.88; 1♂ Munty, 12.vii.88. Both specimens were swept from moderately tall bog vegetation. The Munty site was close to birch and sallow scrub near a stream. Fonseca (1978) records it for north east Somerset. It was a very frequent species at seven sites surveyed in west Dorset in 1987 (Drake, 1988b).

Syntormon tarsatus (Fallén), Dolichopodidae. 3♂, Ringdown, 11.vii.88; 4♂ 2♀, Southey Moor, 9 and 14.vii.88; Gotleigh Moor (Devon) 14.vii.88. The specimens were swept from a range of habitats that included wet woodland, carr woodland, grazed open bog, scrubby bog with acid pasture and a well vegetated spring. All sites had seepages. This species may be widespread in the west and north of Britain.

Sapromyza albiceps Fallen, Lauxanidae. 1♂, Ringdown Common, 15.vii.88. Swept from very dense, tussocky *Molinia* with abundant birch scrub on damp peat.

Lyciella illota (Loew), Lauxanidae. 1♀, Deadman, 8.vii.88. Swept from open grazed and marshy ground.

Eccoptomera microps (Meigen), Heleomyzidae. 1♂, Blackdown Common, 14.vii.88, caught in a pitfall trap set in deep litter under dense tussocks of *Molinia* with remnants of wet heath vegetation. Earthworms were found in the peat here, so moles, with which it is known to be associated (Collin, 1943) may be present here.

Psacadina verbeckei Rozkošný, Sciomyzidae. 1♂, Deadman, 8.vii.88, swept from a marshy field with boggy seepages though more precise details were not recorded. Ball & McLean (1986) show this species to be widely distributed in southern Britain and state that adults are found in fens and sometimes in mesotrophic wetlands. The Deadman site falls into the latter category. There is a pre-1960 record from Somerset.

Opomyza lineatopunctata von Roser, Opomyzidae. Ringdown Common, 15.vii.88. Numerous specimens were swept from a very small area of dense tussocky *Molinia* under birch woodland at the margin of an old deciduous plantation. The ground was partially, and probably permanently, flooded. Although dense *Molinia* covers most of this 150 ha common, and shaded wet areas similar to that described above were frequent, *Opomyza lineatopunctata* was found nowhere else. An association with *Molinia* is emerging from collected records but it has yet to be shown that this grass is the host plant.

Aphanotrigonum nigripes (Zetterstedt), Chloropidae. 1♂1♀, Ringdown Common, 14.vii.88. Caught in a water trap placed among dense tussocks of *Molinia* close to birch scrub. This species may be widespread in southern Britain. There are published records for the New Forest (Hants) (Ismay, 1980), Dorset and Suffolk (Collin, 1946). Falk (pers. comm.) has received records from Norfolk, Kent and Gwynedd. Ismay (1980) suggested that its habitat may be heathland and the present capture would certainly support the notion of an acid habitat.

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